September 4th.—Edward Doubleday, Esq., V.P., in the Chair.

Dr. Becker of Wiesbaden exhibited a new species of *Papilio* from South America, and also a specimen of the very rare *P. Protodamas*.

Mr. S. Stevens exhibited specimens of *Sibinia arenaria, Mononychus Pseudacori, Cicindela germanica, Micronyx pygmæa,* &c., recently captured in the Isle of Wight; also of *Apion Schönherri, Choragus Sheppardi, Mecinus circulatus,* and various *Lepidoptera,* the latter captured by daubing sugar upon the trunks of trees in the neighbourhood of Arundel.

Mr. F. Smith exhibited specimens of *Platypeza subfasciata* ? (a *Dipterous* insect varying greatly in the two sexes,) reared from fungi from Birch wood; also *Pissodes Pini* from Weybridge.

Mr. Evans exhibited specimens illustrating the natural history of *Mamestra Brassicæ* and *Euthalia impluviata*; also a specimen of *Margaritia diversalis,* taken by himself either in Yorkshire or at Darenth wood in June last.

The following papers were read:—

Notice of a Gynandromorphous specimen of *Smerinthus Populi.* By George A. Thrupp, Esq.

Description of an ancient Irish Amulet made in the form of and used as a charm against the Murrian Caterpillar. Communicated by W. F. Evans, Esq.

Descriptions of some new species of Exotic Spiders, and two species of *Pœciloptera.* By A. White, Esq., by whom some additional observations were made on the study of arachnology, and upon the structure of the nests of two British species of spiders. He likewise read an extract from Abbott's MSS. in the British Museum, on the habits of one of the fossorial *Hymenoptera* which collects spiders for the provisioning of its nest.

MISCELLANEOUS.

Observations on the group Schizopetaleæ *of the family of* Cruciferæ.

By J. Marius Barneoud*.

In 1822 Mr. Francis Place, on his return from a voyage to Chili, introduced into England a charming plant having four elegantly pinnate petals, and furnished with an embryo with four yellowish cotyledons rolled in a spiral. These extraordinary characters did not prevent Sir William Hooker from placing this plant in the family of the *Cruciferæ*; he formed of it the genus *Schizopetalon,* of which he published an excellent description and a very detailed figure in the 'Exotic Flora,' vol. i. p. 74, by the name of *Schizopetalon Walcheri.* A new coloured figure, but without analysis, appeared somewhat later in the 'Botanical Magazine,' tab. 2379.

Mr. Robert Brown, on his part, had adopted in the 'Botanical Register,' no. 752, precisely the determination and classification of Sir W. Hooker. Nevertheless these two botanists, struck with the remarkable forms which the embryo of this genus presented, had not neglected to state, that it ought to serve as type of a new tribe of *Cruciferæ*; they differed solely on one point: Mr. R. Brown con-

* From the Annales des Sciences Naturelles for March 1845.

sidered the embryo as consisting of four entirely distinct cotyledons; Sir W. Hooker, on the contrary, stated that there were only two semicylindrical cotyledons, each one divided into two very deep lobes. But this interesting question, from the simply descriptive nature of this note, will be examined subsequently in a more general manner; at all events, up to the present day the *Schizopetalon Walcheri* continued the sole representative of a very curious group of plants well deserving the attention of botanists.

Aug. Pyrame DeCandolle, after having established in his beautiful memoir on the *Cruciferæ* the bases of an embryonal classification, subsequently applied them in his 'Prodromus,' and adopted them more or less successfully to the new species; but he had the prudent reserve to place the *Schizopetalon Walcheri* at the extremity of the series and among the genera *Incertæ sedis*. Moreover the species, then somewhat rare, was not well known to him, and he did well to follow in this case the wise principles laid down by Jussieu. The rich collections of plants brought from Chili by our indefatigable traveller Claude Gay have furnished us with numerous materials on the subject; and since the true position of *Schizopetalon* can no longer be called in question, we shall be able to show, that although science owes its most beautiful and most profound investigations on the *Cruciferæ* to the genius of DeCandolle, there may nevertheless be objected to his embryonal classification, its frequently artificial side, owing to the starting from one single organ. Nature appears to have created the group of the *Schizopetaleæ* to prove how little stable are frequently the majority of those sections or subdivisions of family which are not founded upon a totality of characters of affinity, as the true natural method requires.

In the herbarium from Chili we find six species of *Schizopetalon*, of which five are new. If we study these plants with care before dissecting the seed, we are led to arrange them all in the same genus; all have a perfect similitude in the various organs of the flower, the same aspect, and nearly the same habit; in a word, we find an almost uniform plan of generic structure. The anatomy of the seed then demonstrates a considerable difference between several of the species. We find, on the one hand, very minute globular seeds presenting an embryo with four linear and spiral cotyledons, with curved radicle, evidently belonging to the *Spirolobeæ* of DeCandolle; and on the other, oval seeds larger than the preceding, their embryo with two incumbent spathulate cotyledons, and with an almost straight dorsal radicle, evidently belonging to the section *Notorhizeæ*. This is the most striking character of the new genus *Perreymondia* *.

Now it is quite plain that it is impossible to separate, without violating the laws of natural affinity, in a methodical distribution of the Cruciferous plants, these two genera (*Schizopetalon* and *Perreymondia*), so nearly related, and solely distinct as respects the embryo, as it would be necessary to do according to the classification of DeCandolle.

The anatomical structure of the seed of the *Schizopetaleæ* is com-

* In honour of Perreymond, a distinguished botanist of Provence.

posed--1. of an extremely thin, transparent, cellular external envelope, coated with papillæ; 2. of a brown, somewhat thick, central coating; and 3. of an internal membrane surrounding the embryo, and performing the functions of a kind of perisperm. Iodide of potassium shows the presence of numerous grains of starch in it.

The following is a brief monographic sketch of this tribe of the *Cruciferæ* hitherto so little known :—

SCHIZOPETALEÆ, R. Br., Botan. Reg. No. 752.

Petala pinnatifida, longe unguiculata æstivatione involuta. Stamina 6 tetradynama subæqualia. Glandulæ 4 hypogynæ. Siliqua longa, polysperma. Semina globosa vel ovata subalbuminosa. Embryonis cotyledones 4 spirales, vel 2 crasso-spathulatæ. *Folia eleganter pinnatifida vel dentata. Pili omnes ramosi. Flores albi.*—Herbæ andicolæ vel maritimæ in regno Chilensi.

SCHIZOPETALON, Hooker, Exot. Flor. i. p. 74.

Calyx 4-phyllus, apice clausus, erectus. *Petala* 4 pinnatifida longe unguiculata. *Stamina* 6 subæqualia. *Siliqua* pilosa. *Stigma* basi hastatum subsessile. *Semina* globosa, minima, papilloso-rugulosa. *Embryonis* cotyledones 4, lineares, æquales, spiraliter convolutæ. *Radicula* curvata.

1. *Schizopetalon Walcheri*, Hook. in Bot. Mag. tab. 2379.
2. *Schizopetalon maritimum* (nobis). Caule subsimplici, foliis angustis pinnatifidis pilosis, spica laxissima, siliqua nervosa glabriuscula, embryone albo. ⊙

PERREYMONDIA, nov. gen.

Calycis foliola 4, æqualia, erecta, obtusa, clausa. *Corolla* petala 4, hypogyna, longe unguiculata, lamina ovata, eleganter pinnatifida, laciniis linearibus obtusis æstivatione involutis. *Stamina* 6, hypogyna, tetradynama *Filamenta* libera, edentula. *Antheræ* sagittato-lineares. *Glandulæ* hypogynæ 4, lineares, erectæ, obtusæ, petalis subopositæ. *Ovarium* 2-loculare, pubescens. *Stylus* brevis vel nullus. *Stigma* hastatum, apice subacuminatum. *Siliqua* bivalvis, dehiscens, et sæpe ad maturitatem pendula, polysperma, anguste linearis, et pilis ramosis vestita. *Septum* membranaceum stomatibus destitutum. *Semina* ovata, fulva, subrugulosa, subalbuminosa. *Embryonis* albi cotyledones 2, incumbentes, spathulatæ, apice crassæ. *Radicula* dorsalis recta.—*In regno Chilensi. Flores albi.*

1. *Perreymondia dentata* (nobis). Pubescens; caule macilento, foliis oblongis inæqualiter dentatis; spica pauciflora, laxissima; florum pedicellis pilosis. ⊙
2. *Perreymondia rupestris* (nobis). Canescens; caule folioso, ramoso, foliis cano-pinnatifidis, carnosulis; spica laxa; floribus pilosis; siliqua vermiculata, tomentosa. ⊙
3. *Perreymondia multifida* (nobis). Caule ramoso hispidulo, foliis angustis inciso-subbipinnatifidis albicantibus; floribus pilosis; siliqua gracili; stigmate subsessili. ⊙
4. *Perreymondia Brongniartii* (nobis). Caule erecto, ramosissimo, patulo, foliis dentato-pinnatifidis, canescentibus, crassiusculis; spica longa multiflora; siliqua vermiculata; stigmate sessili. ⊙